

Chapter 1

Introduction

1-1. Purpose

This manual provides criteria for the design of landscape plantings and vegetation management at floodwalls, levees, and embankment dams. It is intended as a guide for use for uniformly safe design and not as a restriction to the initiative of the designer. This manual encourages close coordination between the design team members, which include a civil engineer, environmental engineer, biologist, and landscape architect.

1-2. References

EM 1110-2-38, Environmental Quality in Design of Civil Works Projects

1-3. Policy

a. Where the safety of the structure is not compromised and effective flood-fighting and maintenance of the facility is not seriously affected, appropriate landscape planting (trees, shrubs, vines, and grasses) can be incorporated into the design of floodwalls, levees, and dam embankments. Since landscape plantings enhance the environment by preserving and protecting natural resources, they will be considered in all project planning and design studies and will be included in detailed plans in design document reports for each of the structures described in Chapter 3. For projects in which the maintenance of the completed facility will be the responsibility of local interests, the landscape planting will be fully coordinated with the local agency during planning and design to determine the desires of the local sponsor and to obtain assurances that the sponsor has the capability to maintain the plantings.

b. In certain instances, in order to further enhance environmental values and to meet state laws and/or regulations, the local sponsor may request a variance from the standard vegetation guidelines as set forth in this manual. Vegetation variances for flood-control works (FCW) such as levees, floodwalls, and dam embankments may be permitted for either federal or non-federal FCW. The vegetation variance must ensure the following: safety, structural integrity, and functionality of levees, floodwalls, flood channels, and dam embankments are maintained; accessibility is retained for inspection and flood fighting; periodic clearing of some types of woody (trees) and nonwoody (grass, vines, and shrubs) vegetation will be performed when required; and the variance will not be a substitute for poor maintenance practices.

1-4. Esthetics

Esthetics should be of special concern in the design of floodwalls, levees, and embankment dams from the standpoint of protection of the environment and of blending the embankment dams with the surrounding environment. Whenever possible, the project should appear to be a natural extension of the local topography.

The basic design of the structures should be a coordinated effort involving the design engineer, environmental engineer, biologist, landscape architect, and local sponsor. While it is seldom feasible to preserve the natural setting intact, design techniques and careful construction methods can be used to protect or even enhance the environmental and esthetic value of the area. Landscape planting design for project structures should consider the entire area influenced by the contemplated construction. Although plantings are usually confined to construction rights-of-way or within project boundaries, existing architectural style, landscape plantings, and

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environmental anomalies in the surrounding area should be considered in determining the amount and type of planting.